



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,791	09/10/2003	Timo Kivinen	KOLS.049PA	5622

7590 03/23/2006

Hollingsworth & Funk, LLC  
Suite 125  
8009 34th Avenue South  
Minneapolis, MN 55425

EXAMINER

PHAN, HUY Q

ART UNIT PAPER NUMBER

2617

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/659,791

**Applicant(s)**

KIVINEN, TIMO

**Examiner**

Huy Q. Phan

**Art Unit**

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claims 5, 11 and 16, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimoto (US-6,829,484) in view of Itabashi (US-2002/0087542).

Regarding claim 1, Kimoto discloses a method for determining cell-specific location information to be used in a mobile communication network (col. 7, lines 5-10), the method comprising

determining substantially geographical coverage area of the cell (col. 7, lines 10-28), and

storing, cell-specific location information and the geographical coverage area information on the cell in a database such that the two aspects of the information are interlinked (col.7, lines 33-53). But, Kimoto does not particularly show encrypting the cell-specific location information on at least one cell of the mobile communication network to be used in the particular mobile communication network by using a predetermined encryption algorithm. However in analogous art, Itabashi teaches encrypting the cell-specific location information on at least one cell of the mobile communication network to be used in the particular mobile communication network by using a predetermined encryption algorithm (described as “The control circuit 207 performs overall control of the communication terminal 20, so as to, for example, perform deciphering processing of the various types of information demodulated by the reception/transmission circuit 2022, performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80”, see fig. 9 and [0070]). Since, Kimoto and Itabashi are related to a method for providing information in the wireless communication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kimoto as taught by Itabashi in order “to provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety”, see [0014].

Regarding claim 2, Kimoto and Itabashi disclose the method of claim 1. Kimoto

further discloses establishing a data transfer connection from a service provider external to the mobile communication network to the database in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (col. 16, lines 42-58).

Regarding claim 3, Kimoto and Itabashi disclose the method of claim 1. Itabashi further discloses encrypting, in a mobile station connected to the mobile communication network, the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm (fig. 9 and [0070]).

Regarding claim 4, Kimoto and Itabashi disclose the method of claim 3. Kimoto further discloses transmitting a cell positioning service request from the mobile station ("inputting" see col. 7, lines 15-20) to the service provider, the cell positioning service request including the encrypted, cell-specific location information on at least one mobile station, in response to the request (col. 7, lines 15-33), retrieving from the database through the data transfer connection the geographical coverage area information corresponding with the encrypted, cell-specific location information on at least one mobile station in the request (col. 7, lines 33-53), and transmitting a cell positioning service message to the mobile station, the cell positioning service message including at least the geographical coverage area information (col. 7, lines 33-53).

Regarding claim 5, Kimoto and Itabashi disclose the method of claim 4. Kimoto further discloses transmitting the geographical coverage area information in the cell positioning service message as graphic map information (fig. 13).

Regarding claim 6, Kimoto and Itabashi disclose the method of claim 1. Kimoto further discloses storing the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks in the database such that the two aspects of the information are interlinked (col. 7, lines 33-53).

Regarding claim 7, Kimoto discloses a system for determining cell-specific location information to be used in a mobile communication network (col. 7, lines 5-10), wherein at least one network element of the mobile communication network is configured to determine substantially the geographical coverage area of the cell (col. 7, lines 10-28), and cell-specific location information and the geographical coverage area information on the cell are configured to be stored in a database such that the two aspects of the information are interlinked (col. 7, lines 33-53).

But, Kimoto does not particularly show wherein at least one network element of the mobile communication network is configured to encrypt the cell-specific location information on at least one cell to be used in the mobile communication network by using a predetermined encryption algorithm. However in analogous art, Itabashi teaches wherein at least one network element of the mobile communication network is

configured to encrypt the cell-specific location information on at least one cell to be used in the mobile communication network by using a predetermined encryption algorithm (described as “The control circuit 207 performs overall control of the communication terminal 20, so as to, for example, perform deciphering processing of the various types of information demodulated by the reception/transmission circuit 2022, performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80”, see fig. 9 and [0070]); therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kimoto as taught by Itabashi in order “to provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety”, see [0014].

Regarding claim 8, Kimoto and Itabashi disclose the system of claim 7. Kimoto further discloses wherein a connection is provided from a service provider external to the mobile communication network to the database in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (col. 16, lines 42-58).

Regarding claim 9, Kimoto and Itabashi disclose the system of claim 7. Itabashi further discloses wherein a mobile station connected to the mobile communication

network is configured to encrypt the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm (fig. 9 and [0070]).

Regarding claim 10, Kimoto and Itabashi disclose the system of claim 9. Kimoto further discloses wherein the mobile station is configured to transmit a cell positioning service request to the service provider ("inputting" see col. 7, lines 15-20), the cell positioning service request including the encrypted, cell-specific location information on at least one mobile station, in response to the request (col. 7, lines 15-33), the service provider is configured to retrieve from the database the geographical coverage area information corresponding with the encrypted, cell-specific location information on at least one mobile station in the request (col. 7, lines 15-33), and to transmit a cell positioning service message to the mobile station, the cell positioning service message including at least the geographical coverage area information (col. 7, lines 33-53).

Regarding claim 11, Kimoto and Itabashi disclose the system of claim 10. Kimoto further discloses wherein the service provider is configured to transmit the geographical coverage area information in the cell positioning service message as graphic map information (fig. 13).

Regarding claim 12, Kimoto and Itabashi disclose the system of claim 10. Kimoto



Art Unit: 2687

further discloses wherein the cell positioning service message further includes at least some of the following information:

location information on at least one other mobile station

location information on at least one service determined in the service request

(col. 7, lines 33-53)

suggested route to a target destination determined in the service request (col. 63, lines 1-12)

estimated length of distance to be travelled and time used by the mobile station on alleged route information on a cell-specific service (col. 64, lines 4-23).

Regarding claim 13, Kimoto and Itabashi disclose the system of claim 7. Kimoto further discloses wherein the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks are configured to be stored in the database such that the two aspects of the information are interlinked (col. 7, lines 33-53).

Regarding claim 14, Kimoto discloses a mobile station, which is configured to establish a connection to a mobile communication network (col. 7, lines 5-33). But, Kimoto does not particularly show encrypting the cell-specific location information on at least one cell of the mobile communication network to be used in the particular mobile communication network by using a predetermined encryption algorithm. However in analogous art, Itabashi teaches encrypting the cell-specific location information on at

least one cell of the mobile communication network to be used in the particular mobile communication network by using a predetermined encryption algorithm (described as “The control circuit 207 performs overall control of the communication terminal 20, so as to, for example, perform deciphering processing of the various types of information demodulated by the reception/transmission circuit 2022, performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80”, see fig. 9 and [0070]). Since, Kimoto and Itabashi are related to a method for providing information in the wireless communication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kimoto as taught by Itabashi in order “to provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety”, see [0014].

Regarding claim 15, Kimoto and Itabashi disclose the mobile station of claim 14. Kimoto further discloses which is further configured to transmit a cell positioning service request to a service provider providing a cell positioning service, the cell positioning service request including the encrypted, cell-specific location information on at least one mobile station, and receive a cell positioning service message from the service provider, the cell positioning service message including at least the geographical coverage area information corresponding with the encrypted, cell-specific location information.

Regarding claim 16, Kimoto and Itabashi disclose the mobile station of claim 15. Kimoto further discloses which is further configured to present the geographical coverage area information in the cell positioning service message as graphic map information (fig. 13).

Regarding claim 17, Kimoto and Itabashi disclose the mobile station of claim 15. Kimoto further discloses which is further configured to receive from the service provider the cell positioning service message including at least one aspect of the encrypted, cell-specific location information and the geographical coverage area information linked (col. 7, lines 33-53) thereto, determine the encrypted, cell-specific location information corresponding with its location (col. 18, lines 20-25), and update its current location into the geographical coverage area information in the cell positioning service message (col. 40, lines 1-49).

Regarding claim 18, Kimoto and Itabashi disclose the mobile station of claim 15. Kimoto further discloses which is further configured to determine the encrypted, cell-specific location information corresponding with its location, in response to a change in location (col. 18, lines 20-25), store successive encrypted, cell-specific location information, transmit a cell positioning service request to a service provider providing a cell positioning service, the cell positioning service request including the encrypted, cell-specific location information stored in memory, and receive a cell positioning service

message from the service provider (fig. 13), the cell positioning service message including at least the geographical coverage area information corresponding with the encrypted, cell-specific location information stored in memory (col. 40, lines 1-49).

Regarding claim 19, Kimoto and Itabashi disclose the mobile station of claim 15. Itabashi further discloses including computer program means [0178] for encoding cell-specific location information on mobile stations to be used in a mobile communication network into encrypted cell identities according to a predetermined algorithm, and computer program means for decoding the encrypted cell identities into cell-specific location information on a mobile station to be used in the mobile communication network according to a predetermined algorithm (described as "The control circuit 207 performs overall control of the communication terminal 20, so as to, for example, perform deciphering processing of the various types of information demodulated by the reception/transmission circuit 2022, performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80", see fig. 9 and [0070]).

Regarding claim 20, Kimoto and Itabashi disclose the mobile station of claim 19. Kimoto further discloses including computer program means ("FIG. 58 is a block diagram schematically showing a software structure of the mobile terminal", see col. 13, lines 36-38) for generating a cell positioning service request to a service provider

providing a cell positioning service (fig. 58), the cell positioning service request including the encrypted cell identity of at least one mobile station (col. 55, lines 22-30).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

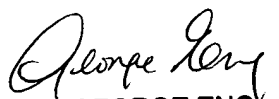
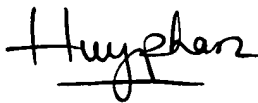
a) Gilhousen discloses that "Information communicated on the cell-to-mobile link channels are, in general, encoded, interleaved, bi-phase shift key (BPSK) modulated with orthogonal covering of each BPSK symbol along with quadrature phase shift key (QPSK) spreading of the covered symbols. In the mobile-to-cell link, access and voice channels are defined. Information communicated on the mobile-to-cell link channels are, in general, encoded, interleaved, orthogonal signaling along with QPSK spreading" (see specification).

b) Ogino discloses that "encrypted data communication between the base station administrator and the subscribers is possible, the base station where such sending time change occurred reports the altered reference time offset or updated sending timing of the signal pattern in encrypted form to the subscribers. Consequently, only the subscribers who have a decrypting key can obtain the updated sending timing information" (see specification).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Q Phan whose telephone number is 571-272-7924. The examiner can normally be reached on 8AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**GEORGE ENG**  
**SUPERVISORY PATENT EXAMINER**

Examiner: Phan, Huy Q.

AU: 2687

Date: 03/09/2006